

Decision Fatigue, Choosing for Others, and Self-Construal

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Abstract

Past research has shown that people tend to feel depleted by their decisions. In contrast, we found people report that making decisions for others (vs. the self) is less depleting because it is more enjoyable. Our investigation thus replicated a prior finding (that decision-making is depleting), moderated it by target of decision (self vs. other), and demonstrated mediation (enjoyment). We further measured chronic focus on self or others (self-construal) and established a full process model that marries prior findings with the current ones: Choosing for others is more enjoyable and less depleting to the extent that decision makers are independent, and less enjoyable and more depleting to the extent that decision makers are interdependent. That a mismatch between chronic and state orientation leads to the better outcomes for self-control indicates a special link between self-construal and decision-making.

Keywords

decision fatigue, ego depletion, self-control, self-construal, enjoyment

Deciding on a course of action is a basic activity for the human mind. Given this assertion, it is perhaps surprising that people often experience the act of making decisions as difficult, onerous, and unpleasant (Luce, Bettman, & Payne, 1999). A separate stream of research shows that making decisions can deplete self-control resources, rendering people less able to achieve their goals or to subsequently make wise decisions (Pocheptsova, Amir, Dhar, & Baumeister, 2009; Vohs et al., 2008). Our investigation married these two findings, in that we predicted and found that a key reason why making decisions worsens self-control is that the process feels unpleasant.

Although several experiments have investigated the influence of decision-making on subsequent self-control and decision-making (Danziger, Levav, & Avnaim-Pesso, 2011; Linder et al., 2014; Pocheptsova et al., 2009; Vohs et al., 2008), there is no work we know of that addresses when decision-making might or might not produce decision fatigue. We sought to replicate past work on decision fatigue and test what makes decision-making more or less draining. We focused on decisions made for others as opposed to the self.

Decision Fatigue

The act of making decisions often is fraught with bias (Gilovich, Griffin, & Kahneman, 2002). One possible source of bias is decision fatigue, which describes a phenomenon in which the limited reserve of stamina for making decisions becomes drained, which leads to poor self-control subsequently (Vohs et al., 2008). Consider one eye-opening study of thousands of

decisions by parole judges. Decisions made in the morning, when few decisions already had been made, were twice as likely (65%) to be favorable, thus granting parole. That number declined to 10% by the end of the judges' workday, after they had made many decisions (Danziger et al., 2011). A similar pattern of decision fatigue was observed among physicians who, after being on the job for several hours, were more likely to prescribe antibiotics for ailments when unwise when to do so (Linder et al., 2014). People make less ethical decisions throughout the day as the supply of self-regulatory resources required to make ethical decisions presumably shrinks (Kouchaki & Smith, 2014). More disconcerting are findings that schoolchildren's exam scores decline if the test is given later, as opposed to earlier, in the school day, consistent with a decision fatigue effect (Sievertsen, Gino, & Piovesan, 2015).

Decisions that take place over a shorter period of time also show evidence of decision fatigue. Consumers buying a car, for example, must decide among a multitude of options (e.g., interior color, exterior color, trim wheel size). Consumers chose more default options at the end of the choice process than the

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beginning, suggesting that after making many decisions people increasingly relied on decision shortcuts (Levav, Heitmann, Herrmann, & Iyengar, 2010). Indeed, going with the default option is a sign of passivity and a hallmark of decision fatigue (Vonasch, Vohs, Baumeister, Pocheptsova, & Dhar, 2015).

What Leads to Decision Fatigue? The Roles of Enjoyment and Choosing for Others

Why do people fail to achieve their goals after making many decisions? The current work investigated the nature of the decisions people made, focusing on those made for the self or others. We posited that making choices for the self could be more taxing than choices for others. A number of literatures pave the way for this prediction. As it turns out, states that offset the effects of self-control depletion are similar to those about how people feel when making decisions for others.

Depletion effects can be overcome by certain inductions. For instance, feeling powerful (DeWall, Baumeister, Mead, & Vohs, 2011), lessening decision trade-offs (Wang, Novemsky, Dhar, & Baumeister, 2010), performing fun tasks (Laran & Janiszewski, 2011), feeling positive (Tice, Baumeister, Shmueli, & Muraven, 2007), and adopting an abstract information-processing mode (Agrawal & Wan, 2009; Schmeichel & Vohs, 2009).

Characteristics of making choices for others reveals parallels with self-regulatory depletion interventions. One theme is that making choices for others puts people in more positive, open, abstract modes. People encouraging a friend to go on a blind date tend to fantasize about possible positive outcomes, such as how exciting the date could be. In contrast, people who decide whether to go on a blind date themselves tend to imagine a pessimistic fate, like having an awful time with a boring partner (Beisswanger, Stone, Hupp, & Allgaier, 2003). People's choices for others are more idealistic and pleasure seeking than the choices that people make for themselves (Laran, 2010; Lu, Xie, & Xu, 2013). People are also more promotion focused when choosing for others than for themselves, reinforcing the notion that decision makers are concerned with more positive information (such as accomplishments and gains) when choosing for others (Polman, 2012a). Perhaps surprisingly, but entirely consistent with this literature, people even enjoy making purchasing decisions for others more than themselves (Dunn, Aknin, & Norton, 2008).

In addition to findings on positive feelings about and approaches to making choices for others, people feel powerful when they choose for others (Polman 2012b), perceive that their decisions require fewer trade-offs (Kray, 2000), and show evidence of an abstract construal level (Polman & Emich, 2011). In all, these findings suggest that situations in which people choose for others bear a striking similarity to those that offset the depleting nature of using self-control.

The convergence between that which offsets depletion and that which characterizes decision-making for others led us to hypothesize that people instructed to choose for others may use fewer self-regulatory resources. Further, given the wealth of

findings that positivity is produced by making decisions for others compared to the self, we also investigated whether enjoying the decision-making process acts as an explanatory variable. That was our hypothesis.

Not Just For Whom—By Whom? The Importance of Self-Construal

Our thesis, that choosing for others can be enjoyable and accordingly renders decision-making less depleting than otherwise, hinges on the question of what makes decision-making more enjoyable for others than for the self. One possible reason involves who bears the consequences of the decisions. Decisions whose outcomes would exert less of an impact on the self could be experienced as rather freeing and fun, especially in contrast to decisions that would more notably affect the self. This idea could underlie the differences in mood, mind-sets, decision stress, and power (reviewed above) that mark decisions for others versus the self.

There are, however, types of people who would not find making decisions for others to entail fewer consequences for the self, and those people might not show less depletion than when making decisions for oneself. One construct that might alter the nature of decision-making is self-construal. Self-construal is the degree to which information processing, goals, and decisions are aimed at addressing the self's wants and needs or others' (Markus & Kitayama, 1991). People with an interdependent self-construal tend to prioritize others over themselves, including feeling accountable to others. In contrast, people with an independent self-construal are focused on and feel accountable to the self more so than others.

Given individual differences in prioritizing outcomes for the self versus others, we posited that decision makers with an interdependent sense of self may not experience the enjoyment associated with choosing for others as much as would decision makers with an independent self. Support for this idea comes from findings that when people high in interdependence make choices for others, as opposed to the self, they show more dissonance (an uncomfortable state of arousal), whereas the reverse is seen among people high in independence; they experience less dissonance making decisions for others (Hoshino-Browne et al., 2005; Kitayama, Snibbe, Markus, & Suzuki, 2004). The explanation behind this finding supports our rationale for the current hypotheses: Suboptimal decisions made for the self are experienced as costlier to people with an independent self-construal, whereas suboptimal decisions made for others are costlier to people with an interdependent self-construal (Pöhlmann, Carranza, Hannover, & Iyengar, 2007).

We tested the role of self-construal in moderating enjoyment and self-regulatory fatigue following decision-making for the self or others. We predicted that choosing for others (compared to the self) would be more enjoyable and less depleting to the extent that decision makers are independent, whereas it would be less enjoyable and more depleting to the extent that decision makers are interdependent.

The Present Experiments

Three experiments, studying a total of 957 respondents, tested four key hypotheses: One, does decision-making for others lead to less depletion than decision-making for the self? Two, does making decisions for others, versus the self, elicit greater feelings of enjoyment? Three, do feelings of enjoyment account for the effects of decision-making on self-control (a mediation hypothesis)? Four, are the proposed effects dependent on self-construal level?

Our experiments also provided attempts to replicate past work on decision fatigue. Given the substantial value and broad theoretical importance of decision fatigue, our work can be seen as a replication attempt of past work as well as an attempt to illuminate novel theoretical aspects of the connection between decision-making and self-control. For each study, we decided ahead of time on a minimum sample size per cell, and statistical power ranged from .97 to .99 across studies.

Experiment 1

Experiment 1 sought to establish the basic effect that decisions made for the self, versus for others, result in more depletion. We instructed participants to make choices for themselves or others for nine choice situations. Participants in two nonchoice conditions rated how difficult it would be to make choices for the self or others in those situations. We measured depletion by assessing support for a status quo option—a sign of passivity, which indicates depletion (Danziger et al., 2011; Levav et al., 2010; Vonasch et al., 2015).

Method

Four hundred and fifty adults participated in an online experiment via Amazon's crowdsourcing website, Mechanical Turk (MTurk). They were randomly assigned to one of the four conditions. Participants responded to 10 situations. The first nine situations (online Supplemental Material) formed the independent variable and the last situation was the outcome measure. For the first nine scenarios, participants randomly assigned to the self-choice condition ($n = 150$) made choices for themselves, whereas participants in the other-choice condition ($n = 150$) made choices for someone else indicated in the scenarios. Participants assigned to the nonchoice conditions read scenarios that either described choices for the self ($n = 75$) or choices for someone else ($n = 75$). Participants in these conditions did not make choices. Instead they rated how difficult it would be to make the choices on a scale from 1 (*very difficult*) to 7 (*very easy*).

The tenth scenario was the measure of interest. This scenario, which was the same in all conditions, described an organization that was contemplating a change to its investment fund. The organization was deciding whether to stay with the current fund, which was expected to earn 8.15% the next year, or switch to a new fund that was expected to earn 8.65%. We

assessed whether participants recommended sticking with the status quo or switching to the new option.

Results and Discussion

We tested the hypothesis that making choices for the self would be more depleting, as revealed in support for the status quo option, when compared to making choices for others and not making choices. First, we assessed whether the two nonchoice conditions showed significant variation. They did not, for the self, .37; for others, .32, $\chi^2(1) = 0.42, p = .519$, so we collapsed these conditions into one nonchoice condition, where the proportion preferring the status quo was .35, moreover, there was no difference in difficulty ratings between these conditions; $M = 4.29, SD = 0.83$ for the nonchoice/self condition and $M = 4.21, SD = 1.00$ for nonchoice/other condition, $t(148) = 0.15, p = .88$. Descriptively, the proportions of participants preferring the status quo in the choice conditions were .52 among participants who made choices for themselves and .38 for participants who made choices for others.

A chi-square test revealed a significant difference among the three conditions, $\chi^2(2) = 10.45, p = .005$. Planned comparisons revealed support for the prediction. There was significantly more support for the status quo (passivity) in the condition where participants chose for themselves compared to participants in the other two conditions: the other-choice condition in which participants chose for others, $\chi^2(1) = 5.94, p = .015$, and the nonchoice condition, $\chi^2(1) = 8.82, p = .003$. Further, we observed no difference in the proportions selecting the status quo among participants who chose for others and participants in the nonchoice condition, $\chi^2(1) = 0.29, p = .589$. These findings indicate that decision fatigue increased among participants choosing for the self, rather than was lessened among participants choosing for others. This difference was not predicted by duration spent making choices, which did not differ by condition, $F > 1.26, p = .28$.

In sum, Experiment 1 found support for the hypothesis that making decisions for others is less depleting than making choices for oneself. In doing so, it demonstrated a novel finding, by showing when decision-making does not cause self-control failure as well as replicated prior work that making choices for the self is more depleting than a neutral condition (Vohs et al., 2008). In addition, it is worth noting that the methodology in Experiment 1 provided a potentially conservative test, in that our nonchoice participants nonetheless thought about making choices but did not make any. Making decisions was psychologically taxing to a greater extent than merely thinking about choices.

Experiment 2

Experiment 2 moved the investigation to actual behavior and measured a putative mediator, enjoyment. We measured consumption of a mildly unpleasant but healthy vinegar-based drink, which has been used in prior work as a sign of self-control (Vohs et al., 2008).

Experiment 2 also tested an alternate explanation for Experiment 1's effects. People who choose for others could be making riskier choices than they make for themselves (Hsee & Weber, 1997), and perhaps making risky choices (not making choices for others, per se) explains differences in subsequent fatigue.

Method

One hundred and ninety-five undergraduates participated in exchange for extra credit. Participants responded to 10 scenarios, drawn from past work on decision-making. Each scenario described a choice pertaining to an issue college students might face (Beisswanger et al., 2003; online Supplemental Material). Participants responded to the scenarios by making choices for the same-sex friend or for the self, selecting from a risky or conservative option. After responding, participants indicated how much they enjoyed making the choices (1 = *not at all*; 9 = *a lot*).

Next, participants were led to believe that the experiment was over and that a new experiment concerning motivation was beginning. Participants were offered one-ounce cups of a somewhat unpleasant mixture of water, vinegar, and drink mix (Vohs et al., 2008). Fewer ounces consumed are indicative of depletion because drinking the mixture requires self-control to override the unpleasantness of the taste.

Results and Discussion

We tested the prediction that participants who made choices for themselves would drink less of the healthy unpleasant tasting drink than participants who made choices for others. As predicted, participants who made choices for themselves drank fewer ounces ($M = 3.30$, $SD = 2.57$) than participants who made choices for others ($M = 4.60$, $SD = 2.16$), $F(1, 193) = 14.71$, $p < .001$, $\eta^2 = .07$. Moreover, participants who made choices for themselves enjoyed making the choices less ($M = 4.99$, $SD = 1.95$) compared to participants who made choices for others ($M = 6.24$, $SD = 2.13$), $F(1, 193) = 18.46$, $p < .001$, $\eta^2 = .08$. Thus, we observed that choosing for others was less depleting and more enjoyable than choosing for the self. We also found that participants who made choices for others, versus the self, chose more risky options ($M = 5.54$, $SD = 1.45$; $M = 4.49$, $SD = 1.56$), $F(1, 193) = 22.96$, $p < .001$, $\eta^2 = .11$.

We carried out a bootstrapping procedure to determine whether enjoyment mediated the relation between choice condition (self vs. other) and ounces of unpleasant drink mixture consumed. Consistent with Hayes's (2013) guidelines, mediation was tested by deriving a confidence interval for the indirect effect of choice condition (self vs. other) on number of ounces consumed, through enjoyment (the putative mediator), with number of risky choices as a covariate, since this outcome differed by condition. One thousand repeated random samples were used to compute the indirect effect. Results indicated that the indirect effect was estimated to lie between -1.21 and

-0.31 ($b = -.78$, standard error [SE] = .23), confirming that enjoyment did act as a mediator (the direct effect was not significant). A similar analysis without number of risky choices as a covariate showed the same pattern of results. These analyses support our prediction that choosing for others is an enjoyable pursuit that lessens self-control depletion.

An additional analysis replaced enjoyment as the mediator with the number of risky options chosen. There was no support for mediation (the indirect effect was estimated to lie between -0.32 and 0.15) nor for mediation of the indirect effect of condition (self vs. other) on number of risky options chosen through the mediator, enjoyment (the indirect effect was estimated to lie between -0.37 and 0.01). Hence, although we did observe that decision makers chose riskier options for others, it was not the case that making risky choices had an influence on depletion.

Experiment 2's results supported the prediction that choosing for others is less depleting than choosing for the self as measured by consuming a healthy but unlikable drink. In doing so, Experiment 2 provided a conceptual replication of Barber and Smit's (2014) and Vohs et al.'s (2008) findings showing that enjoying a choice task helps offset ego depletion. This dependent variable was the same as in Vohs et al.'s (2008) investigation, providing a close comparison to that original work.

Going further than prior work are the results of the mediational model. Decisions for others (vs. the self) led to more enjoyment of the decision-making process, which led to better self-control. Further, we tested whether decision makers make riskier choices for others and whether this tendency might explain self-control outcomes. While we did observe that decision makers chose more risky options for others, it was not that making risky choices had a measurable influence on later self-control.

Experiment 3

Why does choosing for the self, versus others, produce deleterious self-control? We showed that enjoyment of the decision-making process is one explanation—but that begs the question of what underlies decision enjoyment. We sought to test the notion that the more that decision makers are focused on the self versus others alters the depleting nature of decision-making. If focusing on others leads decision makers to be concerned with the potential outcomes of the decision, then perhaps decision-making for others will not be that enjoyable and costless in terms of depletion.

We predicted that Experiments 1 and 2's findings would reverse among people possessing a strong interdependent sense of self such that choosing for others would be more depleting than choosing for the self. In parallel, we predicted that the results of Experiments 1 and 2, that choosing for others results in less depletion than choosing for the self, would endure to the extent that people's sense of self is independently oriented.

Table 1. Indirect Effects of Choice on Ego Depletion at Low, Mean, and High Values of Interdependent and Independent Self-Construal.

	Independent Self-Construal		Interdependent Self-Construal		Effect	Confidence Interval
Enjoyment	3.94	–1SD	4.24	–1SD	26.41	[2.49, 61.54]
Enjoyment	3.94	–1SD	4.96	Mean	–3.21	[–31.20, 21.20]
Enjoyment	3.94	–1SD	5.67	+1SD	–32.83	[–76.72, –4.38]
Enjoyment	4.72	Mean	4.24	–1SD	39.65	[17.45, 73.80]
Enjoyment	4.72	Mean	4.96	Mean	10.03	[–3.81, 30.68]
Enjoyment	4.72	Mean	5.67	+1SD	–19.59	[–48.06, 0.37]
Enjoyment	5.50	+1SD	4.24	–1SD	52.89	[24.45, 105.39]
Enjoyment	5.50	+1SD	4.96	Mean	23.27	[4.49, 52.09]
Enjoyment	5.50	+1SD	5.67	+1SD	–6.35	[–31.61, 14.31]

Method

Three hundred and twelve adults participated in an online experiment via MTurk. Participants first completed a measure that assessed their degree of independent self-construal ($\alpha = .80$) and interdependent self-construal ($\alpha = .71$; Singelis, 1994).

Then, using a between-subjects design, participants read nine scenarios (adapted from Brooks and Schweitzer, 2011; online Supplemental Material) and made choices for the self or others from a list of options. They were instructed to choose an option for themselves or a friend, according to condition. Afterward, participants rated the degree to which they enjoyed making the choices (“How much did you enjoy making your choices?”) from 1 (*not at all*) to 9 (*a lot*).

Next came the self-control task. Participants were instructed to solve five anagrams, ostensibly to pretest materials for future experiments. The anagrams were unsolvable, and we used the amount of time participants spent trying to solve them as an indicator of self-regulatory resource depletion. We interpreted longer duration persisting as reflecting more self-control, which is needed to override the desire to quit the difficult task (Baumeister, Bratslavsky, Muraven, & Tice, 1998).

Results and Discussion

As predicted, choice condition (self vs. other) caused time spent on the anagram task (the measure of self-control behavior) and ratings of enjoyment. A generalized linear model that included one categorical predictor (choice for oneself vs. other) and two continuous predictors, independent and interdependent self-construal scores, predicted persistence at the anagram task and, separately, enjoyment ratings. Both analyses yielded a main effect of choice condition, persistence $\chi^2(1) = 3.88$, $p = .049$; enjoyment $\chi^2(1) = 4.38$, $p = .036$. Hence, Experiment 3 replicated the findings from Experiments 1 and 2 in showing that choices for others are less depleting and more enjoyable.

Next, we assessed the indirect effect of choice condition (self vs. other) on persistence through enjoyment at different degrees of self-construal (Model 10; Hayes, 2013). This model calculated the indirect effect of choice at the mean levels of each self-construal orientation as well as at 1SD below and above the mean. Table 1 presents a display of the results and

95% confidence intervals (using 1000 repeated random samples). The 95% confidence interval for the indirect effect of choice (through the mediator, enjoyment) among participants who predominantly had an interdependent self-construal (i.e., participants who were higher on interdependence and lower on independence) ranged from 24.45 to 105.39 ($b = 52.89$, $SE = 18.66$). The 95% confidence interval for the indirect effect of choice (through the mediator, enjoyment) among participants who predominantly had an independent self-construal (i.e., participants who were higher on independence and lower on interdependence) ranged from –76.72 to –4.38 ($b = –32.83$, $SE = 17.06$). Since neither confidence interval contained zero, we can conclude full mediation, $p < .05$ (the respective direct effects were not significant).

These findings illustrate that the predicted effect that making choices for others, relative to making choices for the self, is less depleting and more enjoyable among decision makers who are highly focused on attending to the self’s needs and desires. In contrast, and as predicted, making choices for others (vs. the self) is more depleting and less enjoyable among decision makers who place a high priority on attending to others’ needs and desires. Through moderation and mediation models, we showed that people experience more enjoyment and less decision fatigue when the focus of their decision-making was inconsistent with their chronic emphasis on the self versus others.

General Discussion

The link between decision-making and self-control is predicted by theories of executive functioning and backed by empirical research (Baddeley, 1986; Vohs et al., 2008). Until recently, the emphasis has been on decision-making for the self—that is, in contexts devoid of the involvement of or implications for others. This approach is fairly typical in psychology, a discipline largely housed in Western culture (Henrich, Heine, & Norenzayan, 2010). The current research investigated decision-making for others as a potential moderator of the decision fatigue effect.

Experiment 1 showed that after making choices for the self, as opposed to others, people preferred the status quo more often—an indication that people making decisions for the self had used more self-control during that task. Additionally,

making decisions for the self led to worse self-control later compared to nonchoice conditions, which replicates prior work (Vohs et al., 2008). Experiment 2 again manipulated the target of choice (self vs. other) and found that participants who made choices for others enjoyed making those choices more and were able to consume more of a relatively unpleasant, but healthy, vinegar-based beverage. Moreover, Experiment 2 found that, as expected, enjoyment mediated the relationship between condition (choosing for others or the self) and subsequent self-control (beverage consumption). Experiment 3 tested our key moderator, self-construal, and found a predicted reversal of the patterns just described. To the extent that participants were independent, they reported greater enjoyment after making choices for others and were less depleted (relative to making choices for themselves). In contrast, to the extent that participants were interdependent, they reported less enjoyment after making choices for others and were more depleted by the choices (relative to making choices for themselves). These convergent findings—seen when testing student and community adult populations, in the laboratory and online, using self-report and behavioral measures, and providing three replications of known findings in the literature—give confidence in the results.

Mismatches Between Trait and State Self-construal Can Offset Decision Fatigue

Our findings suggest a curious consequence of needing to make choices for the self or others combined with having a strong desire to meet the needs of oneself or others. In contrast to much other work on states and traits, we found that a mismatch between chronic and state orientation leads to better outcomes than a match. Most work finds that syncing the two leads to the most advantageous outcomes, such as in regulatory focus (Shah, Higgins, & Friedman, 1998), construal level (Pfeiffer et al., 2014), and mind-sets (Hamilton, Vohs, Sellier, & Meyvis, 2011). Our work tells of the opposite effect. To illustrate, after a self-oriented individual has agonized over which paint color to choose for her *own* living room, she might find it refreshing to talk about and help *someone else* who is also deciding among paint colors—in spite of the pain she originally felt when choosing for herself. In difficult choices such as this one, it might help if people imagine their own choices as belonging to somebody else—and then decide.

The implications for this pattern could be many. Consider that people self-select into environments, which means that selecting a career or lifestyle that may demand making choices for the self or others. While getting oneself into environments that match one's chronic orientation toward the self or others has obvious appeal, from the perspective of the current findings, it may also be problematic. For example, nurses who are motivated by empathy experience career burnout more often than nurses whose interests are not as other focused (Pines, 1982). Likewise, when dealing with customers, other-oriented retail employees experience lower job satisfaction and greater turnover intentions than self-oriented employees

(Holmvall & Sidhu, 2007). In this way, professional and service workers might find themselves victims of their own chronic focus on others.

Theoretical explanations have been advanced to describe the deleterious effects of using self-control on later self-control. One explanation centers around a limited resource model: When people expend energy on one self-control task, they have less energy available to spend when a second task requires control (Baumeister, Vohs, & Tice, 2007). Another possibility is that decision fatigue may occur because decision makers' priorities shift. After making repeated decisions, decision makers could decide the next situation that demands self-control or good decision-making is not worth the effort (Inzlicht & Schmeichel, 2012; Kurzban, Duckworth, Kable, & Myers, 2013). Given that judges and physicians evidence decision fatigue over the course of the workday (Danziger et al., 2011; Linder et al., 2014), it seems unlikely that their priorities change as the day passes. Likewise, schoolchildren who perform poorly on important national exams are not likely to have decided that the test is not worth performing well (Sievertsen et al., 2015). These findings support the idea that decision fatigue might be better understood as resulting from depleted self-regulatory resources.

Other perspectives are also relevant. Making choices for others in the context of one's work could be depleting to the extent decision makers perceive their jobs as work. This interpretation comes from research showing that identical tasks are more depleting when they are framed as "work" than when they are framed as "fun" (Laran & Janiszewski, 2011). Indeed, perceived depletion (irrespective of actual depletion) affects subsequent self-control (Clarkson, Hirt, Jia, & Alexander, 2010). Thus, even among independently oriented decision makers, making decisions for others may not be substantially less depleting than decisions for the self if the process feels like drudgery or if is perceived as "work."

Our research makes connections to other findings in self-regulation and decision-making. While we studied choice contexts that were fairly neutral or positive, it is possible that the patterns seen here would not evince when people make choices about undesirable outcomes (Botti, Orfali, & Iyengar, 2009). Other choice contexts, such as those that align with important personal values, might also show different patterns than those documented here (Moller, Deci, & Ryan, 2006). Last, although we included a nonchoice/control condition in Experiment 1, we did not include a control condition in Experiments 2 and 3, which places a modest constraint on our conclusions.

In closing, the current findings underscore the value of taking an interpersonal approach to decision fatigue (and decision-making in general) and suggest that that unearthing the processes comprising different choices (for whom choices are made, and by whom) will be fruitful lines of inquiry for future work.

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References

- Agrawal, N., & Wan, E. W. (2009). Regulating risk or risking regulation? Construal levels and depletion effects in the processing of health messages. *Journal of Consumer Research*, *36*, 448–462.
- Baddeley, A. (1986). Working memory. *Science*, *255*, 556–559.
- Barber, L. K., & Smit, B. W. (2014). Using the networked fire chief for ego-depletion research: Measuring dynamic decision-making effort and performance. *Journal of Social Psychology*, *154*, 379–383.
- Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego depletion: Is the active self a limited resource? *Journal of Personality and Social Psychology*, *74*, 1252–1265.
- Baumeister, R. F., Vohs, K. D., & Tice, D. M. (2007). The strength model of self-control. *Current Directions in Psychological Science*, *16*, 351–355.
- Beisswanger, A. H., Stone, E. R., Hupp, J. M., & Allgaier, L. (2003). Risk taking in relationships: Differences in deciding for oneself versus for a friend. *Basic and Applied Social Psychology*, *25*, 121–135.
- Botti, S., Orfali, K., & Iyengar, S. S. (2009). Tragic choices: Autonomy and emotional responses to medical decisions. *Journal of Consumer Research*, *36*, 337–352.
- Brooks, A. W., & Schweitzer, M. (2011). Can nervous Nelly negotiate? How anxiety causes negotiators to make low first offers, exit early, and earn less profit. *Organizational Behavior and Human Decision Processes*, *115*, 43–54.
- Clarkson, J. J., Hirt, E. R., Jia, L., & Alexander, M. B. (2010). When perception is more than reality: The effects of perceived versus actual resource depletion on self-regulatory behavior. *Journal of Personality and Social Psychology*, *98*, 29–46.
- Danziger, S., Levav, J., & Avnaim-Pesso, L. (2011). Extraneous factors in judicial decisions. *Proceedings of the National Academy of Sciences*, *108*, 6889–6892.
- DeWall, C. N., Baumeister, R. F., Mead, N. L., & Vohs, K. D. (2011). How leaders self-regulate their task performance: evidence that power promotes diligence, depletion, and disdain. *Journal of Personality and Social Psychology*, *100*, 47–65.
- Dunn, E. W., Aknin, L. B., & Norton, M. I. (2008). Spending money on others promotes happiness. *Science*, *319*, 1687–1688.
- Gilovich, T., Griffin, D., & Kahneman, D. (2002). *Heuristics and biases: The psychology of intuitive judgment*. New York, NY: Cambridge University Press.
- Hamilton, R., Vohs, K. D., Sellier, A. L., & Meyvis, T. (2011). Being of two minds: Switching mindsets exhausts self-regulatory resources. *Organizational Behavior and Human Decision Processes*, *115*, 13–24.
- Hayes, A. F. (2013). *An introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: The Guilford Press.
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world?. *Behavioral and Brain Sciences*, *33*, 61–83.
- Holmvall, C. M., & Sidhu, J. (2007). Predicting customer service employees' job satisfaction and turnover intentions: The roles of customer interactional injustice and interdependent self-construal. *Social Justice Research*, *20*, 479–496.
- Hoshino-Browne, E., Zanna, A. S., Spencer, S. J., Zanna, M. P., Kitayama, S., & Lackenbauer, S. (2005). On the cultural guises of cognitive dissonance: The case of Easterners and Westerners. *Journal of Personality and Social Psychology*, *89*, 294–310.
- Hsee, C. K., & Weber, E. U. (1997). A fundamental prediction error: Self–others discrepancies in risk preference. *Journal of Experimental Psychology: General*, *126*, 45–53.
- Inzlicht, M., & Schmeichel, B. J. (2012). What is ego depletion? Toward a mechanistic revision of the resource model of self-control. *Perspectives on Psychological Science*, *7*, 450–463.
- Kitayama, S., Snibbe, A. C., Markus, H. R., & Suzuki, T. (2004). Is there any “free” choice? Self and dissonance in two cultures. *Psychological Science*, *15*, 527–533.
- Kouchaki, M., & Smith, I. H. (2014). The morning morality effect: The influence of time of day on unethical behavior. *Psychological Science*, *25*, 95–102.
- Kray, L. J. (2000). Contingent weighting in self-other decision making. *Organizational Behavior and Human Decision Processes*, *83*, 82–106.
- Kurzban, R., Duckworth, A., Kable, J. W., & Myers, J. (2013). An opportunity cost model of subjective effort and task performance. *The Behavioral and Brain Sciences*, *36*, 661–679.
- Laran, J. (2010). Goal management in sequential choices: Consumer choices for others are more indulgent than personal choices. *Journal of Consumer Research*, *37*, 304–314.
- Laran, J., & Janiszewski, C. (2011). Work or fun? How task construal and completion influence regulatory behavior. *Journal of Consumer Research*, *37*, 967–983.
- Levav, J., Heitmann, M., Herrmann, A., & Iyengar, S. S. (2010). Order in product customization decisions: Evidence from field experiments. *Journal of Political Economy*, *118*, 274–299.
- Linder, J. A., Doctor, J. N., Friedberg, M. W., Nieva, H. R., Birks, C., Meeker, D., & Fox, C. R. (2014). Time of day and the decision to prescribe antibiotics. *Journal of the American Medical Association*, *174*, 2029–2031.
- Lu, J., Xie, X., & Xu, J. (2013). Desirability or feasibility self–other decision-making differences. *Personality and Social Psychology Bulletin*, *39*, 144–155.
- Luce, M. F., Payne, J. W., & Bettman, J. R. (1999). Emotional trade-off difficulty and choice. *Journal of Marketing Research*, *36*, 143–159.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*, 224–253.

- Moller, A. C., Deci, E. L., & Ryan, R. M. (2006). Choice and ego-depletion: The moderating role of autonomy. *Personality and Social Psychology Bulletin*, *32*, 1024–1036.
- Pfeiffer, B. E., Deval, H., Kardes, F. R., Ewing, D. R., Han, X., & Cronley, M. L. (2014). Effects of construal level on omission detection and multiattribute evaluation. *Psychology & Marketing*, *31*, 992–1007.
- Pines, A. (1982). Helpers' motivation and the burn-out syndrome. In T. A. Wills (Ed.), *Basic processes in helping relationships* (pp. 453–475). New York, NY: Academic Press.
- Pöhlmann, C., Carranza, E., Hannover, B., & Iyengar, S. S. (2007). Repercussions of self-construal for self-relevant and other-relevant choice. *Social Cognition*, *25*, 284–305.
- Polman, E. (2012a). Effects of self-other decision making on regulatory focus and choice overload. *Journal of Personality and Social Psychology*, *102*, 980–993.
- Polman, E. (2012b). Self-other decision making and loss aversion. *Organizational Behavior and Human Decision Processes*, *119*, 141–150.
- Polman, E., & Emich, K. J. (2011). Decisions for others are more creative than decisions for the self. *Personality and Social Psychology Bulletin*, *4*, 192–501.
- Pocheptsova, A., Amir, O., Dhar, R., & Baumeister, R. F. (2009). Deciding without resources: Resource depletion and choice in context. *Journal of Marketing Research*, *46*, 344–355.
- Schmeichel, B. J., & Vohs, K. (2009). Self-affirmation and self-control: Affirming core values counteracts ego depletion. *Journal of Personality and Social Psychology*, *96*, 770–782.
- Shah, J., Higgins, T., & Friedman, R. S. (1998). Performance incentives and means: How regulatory focus influences goal attainment. *Journal of Personality and Social Psychology*, *74*, 285.
- Sievertsen, H. H., Gino, F., & Piovesan, M. (2016). Cognitive fatigue influences students' performance on standardized tests. *Proceedings of the National Academy of Sciences*, *113*, 2621–2624.
- Singelis, T. M. (1994). The measurement of independent and interdependent self-construals. *Personality and Social Psychology Bulletin*, *20*, 580–591.
- Tice, D. M., Baumeister, R. F., Shmueli, D., & Muraven, M. (2007). Restoring the self: Positive affect helps improve self-regulation following ego depletion. *Journal of Experimental Social Psychology*, *43*, 379–384.
- Vohs, K. D., Baumeister, R. F., Schmeichel, B. J., Twenge, J. M., Nelson, N. M., & Tice, D. M. (2008). Making choices impairs subsequent self-control: A limited resource account of decision making, self-regulation, and active initiative. *Journal of Personality and Social Psychology*, *94*, 883–898.
- Vonasch, A., Vohs, K. D., Baumeister, R. F., Pocheptsova, A., & Dhar, R. (2015). *Self-control resource depletion impairs active initiative and thus produces passivity*. Unpublished manuscript.
- Wang, J., Novemsky, N., Dhar, R., & Baumeister, R. F. (2010). Tradeoffs and depletion in choice. *Journal of Marketing Research*, *47*, 910–919.

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Online Supplementary File

Self / Choices (Experiment 1)

1. Imagine two people: you and James (whom you do not know), are seated at a bar that has over 50 beers on tap. You both are trying to decide what food to get and what beer to order. James can see all the taps at the bar, whereas from where you are sitting, you can only see some of the taps. You and James are equally excited about having a beer, and have both narrowed the choice down to a lager, or, a seasonal ale (a beer that is only available for part of the year). Both you and James independently consider long and hard which of the two beers to have. Which do you choose?

The lager

The seasonal ale

2. You and Mark (whom you do not know) have independently been planning a week-long vacation either to Paris or to Rio de Janeiro ever since both of you found out that you are due for a vacation. You and Mark are equally excited about the trip. From the moment you found out about this opportunity to go on vacation you have been torn between the two exciting destinations. You have pictured yourself eating fabulous French meals, drinking famous French wines, and overlooking Paris from the Eiffel Tower. You have also pictured yourself relaxing on the beautiful Copacabana Beach, drinking tropical cocktails, and overlooking Rio from the famous Sugar Loaf Mountain. You found out about your vacation opportunity 2 months ago, whereas Mark found out about his vacation opportunity 2 days ago. Both you and Mark independently consider long and hard which of the two places to go. Which do you choose?

Paris

Rio de Janeiro

3. You and Robert (whom you do not know) are independently shopping for an audio book. You wants to buy the audio book purely for some reading pleasure. Robert wants to buy the audio book because he must write a college term paper on a genre of music of his choice. You and Robert have both narrowed down your choice to two options: an autobiography by your favorite male singer and another autobiography by your favorite female singer. Both audio books cost the same. Because neither you nor Robert have enough money, you can only buy one audio book for the time being. Both you and Robert independently consider long and hard which of the two audio books to buy. Which one do you buy?

Audio book by male singer

Audio book by female singer

4. You and Brian (whom you do not know) are both receiving an inheritance that includes two lithographs, one by Pollock, and another by O'Keefe. You have seen prints of the two lithographs before, and have liked them both for a long time. Whereas Brian has never known of the lithographs before. Both you and Brian are visited by the lawyer of the estate and you both get offered a choice of one of the two lithographs. You and Brian are equally excited about this opportunity. You spend quite some time deliberating which choice would make you happier.

Which lithograph would you choose?

The Pollock

The O'Keefe

5. A company has bought several vacation packages to reward select employees. One package offers a week in New York City with many exciting activities (accommodation at the Waldorf Astoria, fine dining, Broadway shows, etc.). The other offers a relaxing week in a beach resort (luxurious hotel rooms, gorgeous private beach, fine dining, etc.). You and Michael (whom you

do not know) are equally excited about taking a vacation. There was, however, a misunderstanding: You expected that you would receive both vacation packages. Michael, however, did not expect to receive either vacation package. So now you have to decide which of the two vacation packages to forgo, and Michael has to decide which of the two packages to choose. Both you and Michael independently consider long and hard which of the two places to go. Which package do you forgo?

New York City

Beach Resort

6. You and Jeffrey (whom you do not know), are seated at opposite ends of a restaurant.

Throughout the meal, you both are independently trying to decide which dessert to order: a mouth-watering, rich, and smooth vanilla bean ice cream, or, a piece of luscious chocolate cake.

You and Jeffrey are equally excited about having dessert. During the main course, you got to see both options displayed on the dessert tray in front of you. However, Jeffrey didn't see the cart – he only see both options' descriptions in the menu. Both you and Jeffrey independently consider long and hard which of the two attractive desserts to have. Which do you choose?

The mouth-watering, rich, and smooth vanilla bean ice cream

The piece of luscious chocolate cake

7. You and David (whom you do not know) are independently shopping for a jacket. You want to buy a jacket purely for going out a night – and for looking good. Whereas David wants to buy a jacket because it is cold, and he needs a warm jacket. You and David have both narrowed down your choice to two jackets by well-known and trusted brands. Both jackets cost about the same, except one jacket is made in California and the other jacket is made in New York. Because neither you nor David have enough money, you can only buy one jacket for the time being. Both

you and David independently consider long and hard which of the two jackets to buy. Which one do you buy?

The jacket from California

The jacket from New York

8. You and Chris (whom you do not know) have independently been planning a week-long spring vacation. You have been debating whether to travel to Paris (France), to Sydney (Australia), or to Rio de Janeiro (Brazil), ever since you found out that you are due for a vacation. In contrast, Chris has been debating whether to travel to Paris (France) or to Rio de Janeiro (Brazil). Both you and Chris are equally excited about taking a trip. You both find the destinations equally attractive. Therefore, you find it very difficult to decide between them. From the moment you found out about this vacation opportunity you have been torn between the exciting destinations. In the process of trying to decide, you and Chris have spent many hours daydreaming about scenes from both vacations. You have pictured yourself eating great French food, drinking famous French wines, and overlooking Paris from the Eiffel Tower. You have also pictured yourself relaxing on the beautiful Copacabana Beach, drinking tropical cocktails, and overlooking Rio from the famous Sugar Loaf Mountain. You have also pictured yourself mingling with the famously friendly Australians, snorkeling in the beautiful reefs, and seeing unique Australian animals (e.g., kangaroos, koalas). Which vacation do you choose?

Paris

Rio de Janeiro

Sydney

9. You and Daniel (whom you do not know) are both big Beatles fans. Until recently, you owned two rare bootleg albums by the Beatles. Unfortunately, they were stolen. One was recorded in

1963 and the other in 1965. You now want to replace these two albums. Daniel never owned either album but has been looking for these two albums for years. Both you and Daniel have a friend who happens to own the two bootleg albums. On your birthdays both you and Daniel are visited by your respective friend and you both get offered a choice of one of the two albums. You and Daniel are equally excited about this opportunity. You both spend quite some time deliberating which choice would make you happier. Which bootleg would you choose?

The 1963 album

The 1965 album

Other / Choices (Experiment 1)

1. Imagine two people: you and James (whom you do not know), are seated at a bar that has over 50 beers on tap. You both are trying to decide what food to get and what beer to order. James can see all the taps at the bar, whereas from where you are sitting, you can only see some of the taps. You and James are equally excited about having a beer, and have both narrowed the choice down to a lager, or, a seasonal ale (a beer that is only available for part of the year). Both you and James independently consider long and hard which of the two beers to have. If you had to make this choice for James, which do you choose?

The lager

The seasonal ale

2. You and Mark (whom you do not know) have independently been planning a week-long vacation either to Paris or to Rio de Janeiro ever since both of you found out that you are due for a vacation. You and Mark are equally excited about the trip. From the moment you found out about this opportunity to go on vacation you have been torn between the two exciting destinations. You have pictured yourself eating fabulous French meals, drinking famous French

wines, and overlooking Paris from the Eiffel Tower. You have also pictured yourself relaxing on the beautiful Copacabana Beach, drinking tropical cocktails, and overlooking Rio from the famous Sugar Loaf Mountain. You found out about your vacation opportunity 2 months ago, whereas Mark found out about his vacation opportunity 2 days ago. Both you and Mark independently consider long and hard which of the two places to go. If you had to make this choice for Mark, which do you choose?

Paris

Rio de Janeiro

3. You and Robert (whom you do not know) are independently shopping for an audio book. You want to buy the audio book purely for some reading pleasure. Robert wants to buy the audio book because he must write a college term paper on a genre of music of his choice. You and Robert have both narrowed down your choice to two options: an autobiography by your favorite male singer and another autobiography by your favorite female singer. Both audio books cost the same. Because neither you nor Robert have enough money, you can only buy one audio book for the time being. Both you and Robert independently consider long and hard which of the two audio books to buy. If you had to make this choice for Robert, which one do you buy?

Audio book by male singer

Audio book by female singer

4. You and Brian (whom you do not know) are both receiving an inheritance that includes two lithographs, one by Pollock, and another by O'Keefe. You have seen prints of the two lithographs before, and have liked them both for a long time. Whereas Brian has never known of the lithographs before. Both you and Brian are visited by the lawyer of the estate and you both get offered a choice of one of the two lithographs. You and Brian are equally excited about this

opportunity. You spend quite some time deliberating which choice would make you happier. If you had to make this choice for Brian, which lithograph would you choose?

The Pollock

The O'Keefe

5. A company has bought several vacation packages to reward select employees. One package offers a week in New York City with many exciting activities (accommodation at the Waldorf Astoria, fine dining, Broadway shows, etc.). The other offers a relaxing week in a beach resort (luxurious hotel rooms, gorgeous private beach, fine dining, etc.). You and Michael (whom you do not know) are equally excited about taking a vacation. There was, however, a misunderstanding: You expected that you would receive both vacation packages. Michael, however, did not expect to receive either vacation package. So now you have to decide which of the two vacation packages to forgo, and Michael has to decide which of the two packages to choose. Both you and Michael independently consider long and hard which of the two places to go. If you had to make this choice for Michael, which package do you forgo?

New York City

Beach Resort

6. You and Jeffrey (whom you do not know), are seated at opposite ends of a restaurant. Throughout the meal, you both are independently trying to decide which dessert to order: a mouth-watering, rich, and smooth vanilla bean ice cream, or, a piece of luscious chocolate cake. You and Jeffrey are equally excited about having dessert. During the main course, you got to see both options displayed on the dessert tray in front of you. However, Jeffrey didn't see the cart – he only see both options' descriptions in the menu. Both you and Jeffrey independently consider

long and hard which of the two attractive desserts to have. If you had to make this choice for Jeffrey, which do you choose?

The mouth-watering, rich, and smooth vanilla bean ice cream

The piece of luscious chocolate cake

7. You and David (whom you do not know) are independently shopping for a jacket. You want to buy a jacket purely for going out a night – and for looking good. Whereas David wants to buy a jacket because it is cold, and he needs a warm jacket. You and David have both narrowed down your choice to two jackets by well-known and trusted brands. Both jackets cost about the same, except one jacket is made in California and the other jacket is made in New York. Because neither you nor David have enough money, you can only buy one jacket for the time being. Both you and David independently consider long and hard which of the two jackets to buy. If you had to make this choice for David, which one do you buy?

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food, drinking famous French wines, and overlooking Paris from the Eiffel Tower. You have also pictured yourself relaxing on the beautiful Copacabana Beach, drinking tropical cocktails, and overlooking Rio from the famous Sugar Loaf Mountain. You have also pictured yourself mingling with the famously friendly Australians, snorkeling in the beautiful reefs, and seeing unique Australian animals (e.g., kangaroos, koalas). If you had to make this choice for Chris, which vacation do you choose?

Paris

Rio de Janeiro

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9. You and Daniel (whom you do not know) are both big Beatles fans. Until recently, you owned two rare bootleg albums by the Beatles. Unfortunately, they were stolen. One was recorded in 1963 and the other in 1965. You now want to replace these two albums. Daniel never owned either album but has been looking for these two albums for years. Both you and Daniel have a friend who happens to own the two bootleg albums. On your birthdays both you and Daniel are visited by your respective friend and you both get offered a choice of one of the two albums. You and Daniel are equally excited about this opportunity. You both spend quite some time deliberating which choice would make you happier. If you had to make this choice for Daniel, which bootleg would you choose?

The 1963 album

The 1965 album

Self / No-Choices (Experiment 1)

1. Imagine two people: you and James (whom you do not know), are seated at a bar that has over 50 beers on tap. You both are trying to decide what food to get and what beer to order. James can

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2. You and Mark (whom you do not know) have independently been planning a week-long vacation either to Paris or to Rio de Janeiro ever since both of you found out that you are due for a vacation. You and Mark are equally excited about the trip. From the moment you found out about this opportunity to go on vacation you have been torn between the two exciting destinations. You have pictured yourself eating fabulous French meals, drinking famous French wines, and overlooking Paris from the Eiffel Tower. You have also pictured yourself relaxing on the beautiful Copacabana Beach, drinking tropical cocktails, and overlooking Rio from the famous Sugar Loaf Mountain. You found out about your vacation opportunity 2 months ago, whereas Mark found out about his vacation opportunity 2 days ago. Both you and Mark independently consider long and hard which of the two places to go. How hard is this choice for you to make?

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5. A company has bought several vacation packages to reward select employees. One package offers a week in New York City with many exciting activities (accommodation at the Waldorf Astoria, fine dining, Broadway shows, etc.). The other offers a relaxing week in a beach resort (luxurious hotel rooms, gorgeous private beach, fine dining, etc.). You and Michael (whom you do not know) are equally excited about taking a vacation. There was, however, a misunderstanding: You expected that you would receive both vacation packages. Michael, however, did not expect to receive either vacation package. So now you have to decide which of the two vacation packages to forgo, and Michael has to decide which of the two packages to choose. Both you and Michael independently consider long and hard which of the two places to go. How hard is this choice for you to make?

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1. Imagine two people: you and James (whom you do not know), are seated at a bar that has over 50 beers on tap. You both are trying to decide what food to get and what beer to order. James can see all the taps at the bar, whereas from where you are sitting, you can only see some of the taps. You and James are equally excited about having a beer, and have both narrowed the choice down to a lager, or, a seasonal ale (a beer that is only available for part of the year). Both you and James independently consider long and hard which of the two beers to have. If you have to make this choice for James, how hard would it be to make this choice?

2. You and Mark (whom you do not know) have independently been planning a week-long vacation either to Paris or to Rio de Janeiro ever since both of you found out that you are due for a vacation. You and Mark are equally excited about the trip. From the moment you found out about this opportunity to go on vacation you have been torn between the two exciting

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4. You and Brian (whom you do not know) are both receiving an inheritance that includes two lithographs, one by Pollock, and another by O'Keefe. You have seen prints of the two lithographs before, and have liked them both for a long time. Whereas Brian has never known of the lithographs before. Both you and Brian are visited by the lawyer of the estate and you both get offered a choice of one of the two lithographs. You and Brian are equally excited about this opportunity. You spend quite some time deliberating which choice would make you happier. If you have to make this choice for Brian, how hard would it be to make this choice?

5. A company has bought several vacation packages to reward select employees. One package offers a week in New York City with many exciting activities (accommodation at the Waldorf Astoria, fine dining, Broadway shows, etc.). The other offers a relaxing week in a beach resort (luxurious hotel rooms, gorgeous private beach, fine dining, etc.). You and Michael (whom you do not know) are equally excited about taking a vacation. There was, however, a misunderstanding: You expected that you would receive both vacation packages. Michael, however, did not expect to receive either vacation package. So now you have to decide which of the two vacation packages to forgo, and Michael has to decide which of the two packages to choose. Both you and Michael independently consider long and hard which of the two places to go. If you have to make this choice for Michael, how hard would it be to make this choice?

6. You and Jeffrey (whom you do not know), are seated at opposite ends of a restaurant. Throughout the meal, you both are independently trying to decide which dessert to order: a mouth-watering, rich, and smooth vanilla bean ice cream, or, a piece of luscious chocolate cake. You and Jeffrey are equally excited about having dessert. During the main course, you got to see both options displayed on the dessert tray in front of you. However, Jeffrey didn't see the cart – he only see both options' descriptions in the menu. Both you and Jeffrey independently consider long and hard which of the two attractive desserts to have. If you have to make this choice for Jeffrey, how hard would it be to make this choice?

7. You and David (whom you do not know) are independently shopping for a jacket. You want to buy a jacket purely for going out a night – and for looking good. Whereas David wants to buy a jacket because it is cold, and he needs a warm jacket. You and David have both narrowed down your choice to two jackets by well-known and trusted brands. Both jackets cost about the same, except one jacket is made in California and the other jacket is made in New York. Because

neither you nor David have enough money, you can only buy one jacket for the time being. Both you and David independently consider long and hard which of the two jackets to buy. If you have to make this choice for David, how hard would it be to make this choice?

8. You and Chris (whom you do not know) have independently been planning a week-long spring vacation. You have been debating whether to travel to Paris (France), to Sydney (Australia), or to Rio de Janeiro (Brazil), ever since you found out that you are due for a vacation. In contrast, Chris has been debating whether to travel to Paris (France) or to Rio de Janeiro (Brazil). Both you and Chris are equally excited about taking a trip. You both find the destinations equally attractive. Therefore, you find it very difficult to decide between them. From the moment you found out about this vacation opportunity you have been torn between the exciting destinations. In the process of trying to decide, you and Chris have spent many hours daydreaming about scenes from both vacations. You have pictured yourself eating great French food, drinking famous French wines, and overlooking Paris from the Eiffel Tower. You have also pictured yourself relaxing on the beautiful Copacabana Beach, drinking tropical cocktails, and overlooking Rio from the famous Sugar Loaf Mountain. You have also pictured yourself mingling with the famously friendly Australians, snorkeling in the beautiful reefs, and seeing unique Australian animals (e.g., kangaroos, koalas). If you have to make this choice for Chris, how hard would it be to make this choice?

9. You and Daniel (whom you do not know) are both big Beatles fans. Until recently, you owned two rare bootleg albums by the Beatles. Unfortunately, they were stolen. One was recorded in 1963 and the other in 1965. You now want to replace these two albums. Daniel never owned either album but has been looking for these two albums for years. Both you and Daniel have a friend who happens to own the two bootleg albums. On your birthdays both you and Daniel are

visited by your respective friend and you both get offered a choice of one of the two albums. You and Daniel are equally excited about this opportunity. You both spend quite some time deliberating which choice would make you happier. If you have to make this choice for Daniel, how hard would it be to make this choice?

Self / Choices (Experiment 2)

1. You and a friend are at a frat party. You spot someone who you find attractive across the room. You are thinking of introducing yourself but feel kind of hesitant because you were looking forward to hanging out with your friends. You decide to...

Stay with your friends

Introduce yourself

2. You have been talking to someone for the last half hour at a frat party. When the night is up, they ask for your phone number, but you feel kind of hesitant because it is unlisted. You decide to...

Be polite, but refuse to give your number

Give your number

3. You have been dancing with and talking to the same attractive person all evening, but the evening is almost over. They invite you to go back to their room for the evening, which you know will undoubtedly lead to casual sex. You decide to...

Say "maybe some other time"

Go along with the invitation

4. You have been dating the same person for quite awhile, but they have admitted to cheating on you. They have openly apologized and said it would never happen again. You have doubts about the relationship and are thinking about breaking up with them. You decide to...

Stick with the relationship

Break up with them

5. You have recently started seeing someone. They ask you to go away for a weekend excursion to the beach. You are a little hesitant because you have only just met, although you really do like them. You decide to...

Stay at home for the weekend

Go to the beach for the weekend

6. You are thinking of calling someone from your psychology class who you like but you've only talked with once. You're afraid that they won't remember who you are when you call. You decide to...

Wait until you talk to them more before calling

Call them

7. You have a crush on someone and are considering buying them a Valentine's Day gift. They don't know you very well, and you're worried about overwhelming them with the gift. You decide to...

Not buy them a gift

Buy them a gift

8. You have been dating someone for awhile and have developed strong feelings for them. You're thinking about professing your true feelings to move the relationship up to the next level, but you're not sure of their feelings. You decide to...

Wait awhile

Tell them how you feel

9. You're at a bar and spot a fairly attractive person sitting near you. You're thinking about buying them a drink, but the person is surrounded by a group of friends, and you're concerned about being rejected in front of so many people. You decide to...

Not buy the person a drink

Buy the person a drink

10. You and your significant other have been thinking about eloping but are worried about major repercussions with friends and family. You decide to...

Wait and have a formal wedding ceremony

Elope

Other / Choices (Experiment 2)

1. You and a friend are at a frat party. Your friend spots someone who they find attractive across the room and is thinking of introducing themselves but feels kind of hesitant because they were looking forward to hanging out among friends. You decide to tell your friend to...

Stay among friends

Introduce themselves

2. Your friend has been talking to someone for the last half hour at a frat party. When the night is up, the person asks for your friend's phone number, but your friend feels kind of hesitant because it is unlisted. You decide to tell your friend to...

Be polite, but refuse to give the number

Give the number

3. Your friend has been dancing with and talking to the same attractive person all evening, but the evening is almost over. The person invites your friend to go back to their room for the

evening, which your friend knows will undoubtedly lead to casual sex. You decide to tell your friend to...

Say "maybe some other time"

Go along with the invitation

4. Your friend has been dating the same person for quite awhile, but that person has admitted to cheating on your friend. The person has openly apologized and said it would never happen again.

Your friend has doubts about the relationship and is thinking about breaking up. You decide to tell your friend to...

Stick with the relationship

Break up

5. Your friend has recently started seeing someone who has asked your friend to go away for a weekend excursion to the beach. Your friend is a little hesitant because they have only just met, although your friend really does like them. You decide to tell your friend to...

Stay at home for the weekend

Go to the beach for the weekend

6. Your friend is thinking of calling someone from their psychology class who they like but only talked with once. Your friend's afraid that the person won't remember who they are when they call. You decide to tell your friend to...

Wait until they talk more before calling

Call them

7. Your friend has a crush on someone and is considering buying them a Valentine's Day gift. The person doesn't know your friend very well, and your friend is worried about overwhelming them with the gift. You decide to tell your friend to...

Not buy them a gift

Buy them a gift

8. Your friend has been dating someone for awhile and has developed strong feelings for them. Your friend is thinking about professing their true feelings to move the relationship up to the next level, but they're not sure of the other person's feelings. You decide to tell your friend to...

Wait awhile

Tell the person how they feel

9. Your friend's at a bar and spots a fairly attractive person. Your friend's thinking about buying the person a drink, but the person is surrounded by a group of friends, and your friend's concerned about being rejected in front of so many people. You decide to tell your friend to...

Not buy the person a drink

Buy the person a drink

10. Your friend and his significant other have been thinking about eloping but are worried about major repercussions with friends and family. You decide to tell your friend to...

Wait and have a formal wedding ceremony

Elope

Self / Choices (Experiment 3)

1. Imagine that you want to purchase a house that has a list price of \$500,000, but comparable prices for homes range from \$350,000 to \$450,000. You can afford to pay \$400,000. The housing market is rising (house prices are increasing), and there are three other buyers interested in the same house. Of the following options, which would you choose?

Wait for another buyer to make an initial offer.

Offer \$400,000 before the other buyers make offers.

Offer \$350,000 before the other buyers make offers.

Look for a different house that has fewer interested buyers.

2. Imagine that you want to buy a house that has a list price of \$200,000, but comparable prices for homes range from \$150,000 to \$250,000. You can afford to pay \$300,000. The housing market is falling (house prices are decreasing), and there are three other buyers interested in the same house. Of the following options, which would you choose?

Wait for another buyer to make an initial offer.

Make a full-price offer of \$200,000 before the other buyers make offers.

Offer \$150,000 before the other buyers make offers.

Look for a different house that has fewer interested buyers.

3. Imagine you have been offered a new job. The company has offered you a salary of \$70,000/year. New hires with similar experience, education, and skills are paid \$75,000/year on average. If you do not take the new job, you will go back on the job market, and the unemployment rate is 10% (very high). You have no other outside options. Of the following choices, which would you choose?

Tell the company you will only accept the job for \$80,000/year.

Tell the company you will only accept the job for \$75,000/year.

Accept the offer at \$70,000/year.

Reject the offer and go back on the job market.

4. Imagine you have been offered a new job. The company has offered you a salary of \$70,000/year. New hires with similar experience, background, education, and skills are paid \$75,000/year on average. If you do not take the new job, you will go back on the job market, and

the unemployment rate is 1% (very low). You have no other outside options. Of the following choices, which would you choose?

Tell the company you will only accept the job for \$80,000/year.

Tell the company you will only accept the job for \$75,000/year.

Accept the offer at \$70,000/year.

5. Reject the offer and go back on the job market.

Imagine that you are buying a new car. You have found the exact car that you want, and the dealer has it in stock. The list price is \$35,000, and from your research the dealer invoice is \$27,000. You really like this car, and you would be willing to pay up to \$35,000 for it. You suspect that other buyers are interested in this same car and that the dealership is not very eager to sell this car. What amount would you make for your first offer?

\$27K

\$28K

\$29K

\$30K

\$31K

\$32K

\$33K

\$34K

\$35K

6. Imagine that you are buying a new car. You have found the exact car that you want, and the dealer has it in stock. The list price is \$35,000, and from your research the dealer invoice is \$27,000. You really like this car, and you would be willing to pay up to \$35,000 for it. You

suspect that other buyers are not interested in this same car and that the dealership is very eager to sell this car. What amount would you make for your first offer?

\$27K

\$28K

\$29K

\$30K

\$31K

\$32K

\$33K

\$34K

\$35K

7. Imagine that you are organizing a large party. You are working with a caterer for a sit-down dinner for 200 people. The caterer is charging you \$100 per person and asks you to commit to the exact number of guests. This caterer is the best in town. You can pay \$20,000, but you would prefer to pay less. How would you respond to this caterer?

Pay full price to ensure good service.

Offer the caterer \$80 per person and commit to 200 people.

Offer the caterer \$100 per person, but insist on paying for only the guests who show up.

Shop for alternative caterers to use as competitive leverage.

8. Imagine that you are organizing a large party. You are working with a caterer for a sit-down dinner for 200 people. The caterer is charging you \$100 per person and asks you to commit to the exact number of guests. This caterer is NOT the best in town. You can pay \$20,000, but you would prefer to pay less. How would you respond to this caterer?

Pay full price to ensure good service.

Offer the caterer \$80 per person and commit to 200 people.

Offer the caterer \$100 per person, but insist on paying for only the guests who show up.

Shop for alternative caterers to use as competitive leverage.

9. Imagine you are getting married to the man or woman of your dreams. Your fiance wants you to sign a prenuptial agreement before you wed because s/he is fairly wealthy. In the case of divorce, the prenuptial offer is to split your wealth and assets 80% for your spouse, 20% for you because that is the ratio of your current wealth. What will you decide to do?

Agree to sign the prenuptial agreement with the 80/20 division.

Agree to sign the prenuptial agreement only with a 50/50 division of wealth and assets to be equitable.

Consult with a lawyer and then make a counter-offer.

Refuse to sign the prenuptial agreement because marriage is about love, not material wealth.

Other / Choices (Experiment 3)

1. Imagine that you're advising your friend who wants to purchase a house that has a list price of \$500,000, but comparable prices for homes range from \$350,000 to \$450,000. Your friend can afford to pay \$400,000. The housing market is rising (house prices are increasing), and there are three other buyers interested in the same house. Of the following options, which would you choose for your friend?

Tell them to wait for another buyer to make an initial offer.

Tell them to offer \$400,000 before the other buyers make offers.

Tell them to offer \$350,000 before the other buyers make offers.

Tell them to look for a different house that has fewer interested buyers.

2. Imagine that you're advising your friend who wants to buy a house that has a list price of \$200,000, but comparable prices for homes range from \$150,000 to \$250,000. Your friend can afford to pay \$300,000. The housing market is falling (house prices are decreasing), and there are three other buyers interested in the same house. Of the following options, which would you choose for your friend?

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Tell them to make a full-price offer of \$200,000 before the other buyers make offers.

Tell them to offer \$150,000 before the other buyers make offers.

Tell them to look for a different house that has fewer interested buyers.

3. Imagine your friend has been offered a new job. The company has offered them a salary of \$70,000/year. New hires with similar experience, education, and skills are paid \$75,000/year on average. If your friend does not take the new job, they will go back on the job market, and the unemployment rate is 10% (very high). Your friend has no other outside options. Of the following choices, which would you choose for your friend?

Tell them they should only accept the job for \$80,000/year.

Tell them they should only accept the job for \$75,000/year.

Tell them to accept the offer at \$70,000/year.

Tell them to reject the offer and go back on the job market.

4. Imagine your friend has been offered a new job. The company has offered them a salary of \$70,000/year. New hires with similar experience, background, education, and skills are paid \$75,000/year on average. If your friend does not take the new job, they will go back on the job market, and the unemployment rate is 1% (very low). Your friend has no other outside options. Of the following choices, which would you choose for your friend?

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Tell them to accept the offer at \$70,000/year.

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\$27K

\$28K

\$29K

\$30K

\$31K

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that the dealership is very eager to sell the car. Your friend asks you to make the decision for them. What would you choose for?

\$27K

\$28K

\$29K

\$30K

\$31K

\$32K

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\$35K

7. Imagine that your friend is organizing a large party. He or she is working with a caterer for a sit-down dinner for 200 people. The caterer is charging you \$100 per person and asks your friend to commit to the exact number of guests. This caterer is the best in town. Your friend can pay \$20,000, but would prefer to pay less. What would you choose for your friend?

Tell them to pay full price to ensure good service.

Tell them to offer the caterer \$80 per person and commit to 200 people.

Tell them to offer the caterer \$100 per person, but insist on paying for only the guests who show up.

Tell them to shop for alternative caterers to use as competitive leverage.

8. Imagine that your friend is organizing a large party. He or she is working with a caterer for a sit-down dinner for 200 people. The caterer is charging you \$100 per person and asks your friend

to commit to the exact number of guests. This caterer is NOT the best in town. Your friend can pay \$20,000, but would prefer to pay less. What would you choose for your friend?

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Tell them to offer the caterer \$100 per person, but insist on paying for only the guests who show up.

Tell them to shop for alternative caterers to use as competitive leverage.

9. Imagine your friend is getting married to the man or woman of their dreams. Their fiancé wants them to sign a prenuptial agreement before they wed because s/he is fairly wealthy. In the case of divorce, the prenuptial offer is to split their wealth and assets 80% for their spouse, 20% for your friend because that is the ratio of their current wealth. What would you choose for your friend?

Tell them to agree to sign the prenuptial agreement with the 80/20 division.

Tell them to agree to sign the prenuptial agreement only with a 50/50 division of wealth and assets to be equitable.

Tell them to consult with a lawyer and then make a counter-offer.

Tell them to refuse to sign the prenuptial agreement because marriage is about love, not material wealth.